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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/925,884	08/06/2001	Michael Kenny	259/079	7035
45540	7590	04/15/2005	EXAMINER	
PERKINS COIE LLP/SEMITOOL PO BOX 1208 SEATTLE, WA 98111-1208			EL ARINI, ZEINAB	
			ART UNIT	PAPER NUMBER
			1746	

DATE MAILED: 04/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/925,884	Applicant(s) KENNY ET AL	
	Examiner Zeinab E. EL-Arini	Art Unit 1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12-14, 17, 20, 22-30, 35, 37, 39 and 41-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-14, 17, 20, 22-30, 35, 37, 39, and 41-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The amendment and remarks filed 01/24/05 has been acknowledged and entered.

The rejection under 35 U.S.C 112, first paragraph stated in paper No.090904 has been withdrawn with the exception of claims 43-44.

The rejection under 35 U.S.C 112, second paragraph stated in paper No. 090904 has been withdrawn.

Claim Rejections - 35 USC § 112

Claims 43-44 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had

possession of the claimed invention. The specification, as originally filed, does not provide support for “in any sequence” as is now claimed in claim 43.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 9-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 9, 10, line 1, “the liquid” has been cited, and however it is not clear if it refers to the heated liquid or the liquid jet.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10, 12-14, 17, 20, 22-29, 37-39, and 41-48 are rejected under 35 U.S.C. 103(a) as being

unpatentable over DeGendt et al. in combination with
EP'177.

DeGendt et al. as discussed supra in paper No.
090904 disclose a method of cleaning a workpiece. The
method comprises, providing a layer of heated liquid on
the workpiece, the temperature, providing ozone, and
removing contaminant, and rinsing the workpiece, and the
sonic energy as claimed.

DeGendt et al. do not teach directing a liquid jet at the
workpiece, spinning the workpiece, moving the liquid jet,
the pressure, diameter of the workpiece, swing arm, and
the angle of the liquid jet as claimed. See col. 3, line 59-
col.4, line 62, col. 7, line 4-col. 8, line 12, and the claims.

EP'177 as discussed supra in paper No. 090904 discloses a method for etching semiconductor wafer. The reference teaches rinsing the substrate with liquid jet to sweep away the HF solution, and spinning the substrate, and controlling the thickness of the layer of processing liquid. See the abstract, Fig. 1, page 2, lines 55-58, page 3, lines 11-page 4, line 24, and the claims.

It would have been obvious for one skilled in the art to use the rinsing jet, and spinning substrate, taught by EP'177 in the DeGendt et al. process to enhance the cleaning process, by sweeping away the contaminants from the surface of the substrate, because DeGendt et al. disclose that the method can be done in a tank which

include spray processor, spinning tools, see col. 3, line 56-
col. 4, line 2.

EP'177 does not teach moving the liquid jet, using
swing arm, the diameter, the pressure as claimed.

It would have been obvious for one skilled in the art to
adjust the pressure and moving speed to obtain optimum
results. Using swing arm is well known in the art.

Claims 30, 35, and 49 are rejected under 35
U.S.C. 103(a) as being unpatentable over DeGendt et al.
in combination with EP'177 and Kunze-Concewitz
(5,964,952).

DeGendt et al. in combination with EP'177 as
discussed supra do not teach using steam as claimed.

Kunze-Concwitz discloses a method of cleaning surfaces with water and steam, a water film is applied to the contaminated surface and steam sprayed into the water film and through the water film into the contaminated surface, whereby contaminants in the contaminated surfaces are removed. See the abstract , Figs. 5, 9, and 12-15, col. 2, lines 13-48, col. 3, lines 12-32, col. 5, lines 6-col. 6, 61, and the claims.

It would have been obvious for one skilled in the art to use the steam taught by Kunze-Concewitz in the DeGendt et al. in combination with EP'177 to improve the cleaning process and to enhance the cleaning process.

Response to Arguments

Applicant's arguments with respect to claims 1-10, 12-14, 17, 20, 22-30, 35, 37, 39, 41-49 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zeinab EL-Arini whose telephone number is 571-272-1301. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on 571-272-1414. The fax phone number for

Application/Control
Number: 09/925,884
Art Unit: ***

Page 10

the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Zeinab E. EL-Arini
Zeinab E. EL-Arini
Primary Examiner
Art Unit 1746

Application/Control
Number: 09/925,884
Art Unit: ***

Page 11

ZEE
04/13/05